TECHNICAL REVIEW DOCUMENT
For
RENEWAL of OPERATING PERMIT 95OPWE035

Kerr-McGee Gathering LLC – Frederick Compressor Station
Weld County
Source ID 123/0184

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I. Purpose:

This document will establish the basis for decisions made regarding the applicable requirements, emission factors, monitoring plan and compliance status of emission units covered by the renewed operating permit proposed for this site. The original Operating Permit was issued April 1, 1998, and expired on April 1, 2003. This document is designed for reference during the review of the proposed permit by the EPA, the public, and other interested parties. The conclusions made in this report are based on information provided in the renewal application submitted September 13, 2002, additional technical information submitted on various dates, previous inspection reports and various e-mail correspondence, as well as telephone conversations with the applicant. Please note that copies of the Technical Review Document for the original permit and any Technical Review Documents associated with subsequent modifications of the original Operating Permit may be found in the Division files as well as on the Division website at http://www.cdphe.state.co.us/ap/Titlev.html.

Any revisions made to the underlying construction permits associated with this facility made in conjunction with the processing of this operating permit application have been reviewed in accordance with the requirements of Regulation No. 3, Part B, Construction Permits, and have been found to meet all applicable substantive and procedural requirements. This operating permit incorporates and shall be considered to be a combined construction/operating permit for any such revision, and the permittee shall be allowed to operate under the revised conditions upon issuance of this operating permit without applying for a revision to this permit or for an additional or revised construction permit.

II. Description of Source

This source is classified as a natural gas gathering and compression facility defined under Standard Industrial Classification 1311. The facility consists of three internal combustion engines for the compression and transmission of natural gas and one triethylene glycol dehydration unit to remove water from the natural gas. One of the engines is equipped with an oxidizing catalyst for emissions control and the glycol dehydration unit is connected to a thermal

oxidizer with condenser to reduce emissions. This facility has a condensate storage tank battery, which is controlled with a flare. Fugitive VOC emissions from equipment leaks are also a source of emissions at this facility.

The facility is located near the community of Fort Lupton in Weld County, Colorado. The area in which the plant operates is designated as attainment for all criteria pollutants. This facility is located in the 8-hr Ozone Control Area as defined in Regulation No. 7, Section II.A.16. There are no affected states within 50 miles of the plant. The following Federal Class I designated areas are within 100 kilometers of the plant: Rocky Mountain National Park.

There are no other Operating Permits associated with this facility. However, EPA has issued a PSD permit for one of the Cooper-Bessemer compressor engines.

MACT Applicability

HHH – Natural Gas Transmission and Storage:
The Frederick facility is not a natural gas transmission and storage facility as described in 40 CFR Part 63 Subpart HHH, "National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage". The Frederick facility is an upstream natural gas production-related gathering and compression station and not subject to this MACT.

HH – Oil and Natural Gas Production Facilities:
The glycol dehydrator construction permit (01WE0349) and renewal operating permit include HAP limits on the dehydrator in order to avoid applicability to the provision in 40 CFR Part 63 Subpart HH, "National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities" (Oil and Natural Gas Production MACT). Under the provisions of the Oil and Natural Gas Production MACT, since the Frederick facility meets the definition of a "production field facility", only HAP emissions from glycol dehydrators and storage vessels with the potential for flash emissions need to be aggregated to determine whether the facility is a major source for HAPS. The condensate tanks at the Frederick facility do not meet the definition of "storage vessels with the potential for flash emissions" since the actual annual average throughput is less than 500 bbl/day (79,500 l/day). Therefore, HAP limits were only necessary for the glycol dehydrator. However, the HAP limits will include both HAP emissions from glycol dehydration units and storage vessels with the potential for flash, in case Kerr McGee installs additional equipment in the future.

ZZZZ – Stationary Reciprocating Internal Combustion Engines:
Under the rules for reciprocating internal combustion engines, for production field facilities, only emissions from glycol dehydrators, storage vessel with the potential for flash emissions, reciprocating internal combustion engines and combustion turbines need to be aggregated to determine if the facility is a major

source for HAPS. An analysis was conducted to determine HAP emissions from the equipment at this facility. Total HAP emissions, based on permitted production, were calculated to be greater than major source levels. Specifically, formaldehyde emissions exceed 10 tons per year. The engines at this facility are potentially subject to the RICE MACT. However, the Cooper Bessimer engines (EU-41 & EU-42) are considered existing 2-stroke lean burn engines, which are not subject to the RICE MACT. The Caterpillar engine (EU-43) is considered a new 4-stroke lean burn engine subject to the RICE MACT. This renewal permit includes the applicable requirements from Subpart ZZZZ. The draft permit will assume that Kerr McGee will comply with the option to reduce carbon monoxide by 93 percent or more (instead of the formaldehyde concentration limit).

Compliance Assurance Monitoring (CAM) Applicability

The triethylene glycol dehydrator is equipped with a thermal oxidizer and condenser to control VOC and HAP emissions. The potential to emit, without controls, exceeds major source levels and the dehydrator is subject to an annual VOC and HAP limit. A CAM plan was submitted for the glycol dehydrator (dated April 16, 2004) and incorporated into the renewal permit.

The condensate storage tank battery is equipped with a flare for control of VOC emissions. The potential to emit of the battery, without controls, exceeds major source levels and the storage tank battery is subject to an annual VOC limit. A CAM plan was submitted for the storage tank battery (dated April 16, 2004) and incorporated into the renewal permit.

Emissions

The summary of emissions that was presented in the Technical Review Document (TRD) for the original permit issuance has been modified to update the potential to emit based on revisions to permitted emission limits, include the condensate storage tank and to update actual emissions. Emissions (in tons per year) at the facility are as follows:

Pollutant	Potential to Emit (TPY)	Actual Emissions (TPY)
PM_{10}	12.5	11.2
NO_X	466.94	398.0
CO	248.3	209.8
VOC	206.2	129.9
Total HAPS	>25	18.5

The PTE shown above is based on permit limitations. Actual criteria pollutant emissions from the engines, fugitive VOCs, dehydrator and condensate tanks are based on the most recent APENs submitted to the Division.

III. Discussion of Modifications Made

Source Requested Modifications

A renewal application was received on September 13, 2002. No changes were requested in the original renewal application other than a change to the facility contact person. It should be noted that in their renewal application, the source submitted a Title V Operating Permit application form No. 2000-100 and on this form they identified the SIC as 1311. The existing permit identified the SIC as 4922.

The Division received a request on June 2, 2003 for cancellation of construction permit 95WE781.

The Division received requests dated March 27, 2003, April 21, 2005 (via email), and April 16, 2004 to incorporate the following construction permits into the Operating Permit renewal: 01WE0349 (Initial Approval issued 7/3/2001), 03WE1153 (Initial Approval Modification No.1 issued 4/28/2004) & 03WE0064 (Initial Approval Modification No.1 issued 9/17/2004).

A July 11, 2003 letter requests the addition of a Volvo Penta, 464 hp engine for emergency generation to the insignificant activity list.

An April 6, 2004 letter requests an increase in the BTU content (to 1060 BTU/scf) of the gas used to fuel the Cooper Bessemer engines. A letter dated August 9, 2005 discusses the Division-required Actual to Potential PSD results and changes the request to 990 BTU/scf. A submittal dated November 4, 2005 includes APENs identifying engine emissions while fueled with 990 BTU/scf gas.

The Division received a letter dated May 6, 2004 which informed the Division that the maximum horsepower of the two Cooper Bessemer engines is 4800 hp, not 4000 hp as previously listed.

The April 16, 2004 letter contained multiple requests. Kerr McGee requested that the component physical hard count be done annually as opposed to a running tally with the hard count conducted every five years. They proposed the removal of the requirement to monitor, repair, and log all potential equipment leaks. Kerr McGee also requested to be allowed to operate the dehydration unit without control from the thermal oxidizer for up to 60 hours per year. Kerr McGee also submitted revised O&M plans and CAM plans with this April 16, 2004 submittal. Finally, a change in responsible official and facility contact person was requested.

The September 1, 2005 letter requests reducing the TEG dehydration unit control device setpoint to 1200 °F from 1400 °F.

A revised APEN for the condensate storage tanks was submitted on April 20, 2006. This APEN requests an increase in bbl/yr.

Comments on the draft permit were received by Kerr McGee on September 15, 2006. A revised APEN and worst-case GRI-GLYCalc run was also submitted along with the comments.

Therefore, all of the source's requested modifications were addressed in the renewal application as follows:

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The Division changed the permit to indicate an SIC of 1311, rather than 4922. The responsible official and facility contact person were updated.

Construction permit 95WE781

This construction permit was cancelled and the custom glycol dehydrator was removed from the Operating Permit as requested.

Construction permit 01WE0349

Section II.2 - Unit EU-01 Custom TEG Dehydration Unit with thermal oxidizer and condenser. The source submitted a construction permit application for this unit on February 14, 2001. The Initial Approval construction permit was issued on July 3, 2001. The requirements of this construction permit were added to the Title V Operating Permit as requested.

1. Applicable Requirements –
Since the previous Operating Permit was issued the Maximum Achievable Control Technology (MACT) provisions of 40 CFR Part 63 Subpart HH "Oil and Gas Production" have been published. Kerr McGee has installed a thermal oxidizer and condenser to reduce the glycol dehydrator emissions. Construction Permit 01WE0349 was drafted to establish federally enforceable emissions limits. The federally enforceable emissions limits allow the Subpart HH affected sources to be classified as synthetic minor sources exempt from the Subpart HH provisions.

The appropriate applicable requirements are as follows:

- Gas processed shall not exceed 29,200 million scf per year.
- VOC emissions shall not exceed 15.15 tons/yr. (this limit was modified to account for the 60 hr/yr control equipment downtime).

- NO_x emissions shall not exceed 2.62 tons/yr and CO emissions shall not exceed 5.27 tons/yr. The emission factors are from TNRCC Flare and Vapor Oxidizers.

- Individual HAP emissions shall not exceed 8.0 tons/yr, total HAP emissions shall not exceed 20.0 tons/yr. These limits were included to ensure Synthetic Minor HAP status to avoid MACT HH. The limits were modified from those found in the construction permit. The limits will include all emissions from glycol dehydration units and storage tanks with the potential for flash.

- The source asked for an "AOS Plan" to operate the dehydrator without control from the thermal oxidizer for up to 60 hours per year. This uncontrolled operation is necessary when the thermal oxidizer is undergoing periodic maintenance. The Division will allow this, but does not consider it an AOS. Emissions were estimated assuming 8700 hours per year with control from the thermal oxidizer and 60 hours per year without control. The emission limits were drafted based on these emission estimates. The permittee must notify the Division of any periodic maintenance at least five days before the event. (Section II, Condition 2.1.5)

- The control system shall be capable of reducing VOC emissions by at least 99.0%. The thermal oxidizer shall operate between 1200 °F and 1900 °F and the condenser shall be operated at 140 °F or less (Section II, Condition 2.4).

- Reg. 1 opacity requirements (Reg. 1, Section II.A.1).

- Reg. 7 – VOC Emissions from Oil & Gas Operations (Reg. 7, Section XII.C).

CAM Plan Review

VOC destruction is dependant upon combustion in the thermal oxidizer. The CAM rule specifies that presumptively acceptable monitoring includes monitoring required for any standards that are exempt from CAM (i.e. MACT standards), provided the monitoring is applicable to the control device (40 CFR Part 64 § 64.4(b)(4), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV). The Oil and Natural Gas Production Facilities MACT (40 CFR Part 63, Subpart HH) regulates emissions from glycol dehydration unit process vents. This MACT requires thermal oxidizers to be equipped with a temperature monitoring device. The temperature sensor must be installed at a location in the combustion chamber downstream of the combustion zone. A minimum or maximum operating parameter is required to be established, as appropriate for the control device to continuously achieve appropriate

performance. These operating parameters shall be established based on values measured during the performance test and supplemented, as necessary, by control device design analysis or control device manufacturer recommendations.

Kerr McGee has proposed to monitor the combustion temperature and maintain it between 1200 °F and 1900 °F. 1200 °F is the minimum temperature required as determined based on the stack test results. 1900 °F is a maximum temperature proposed by Kerr McGee, presumably based on manufacturer specifications. Since this monitoring is similar to the monitoring required by MACT HH, the Division considers monitoring the thermal oxidizer temperature to be presumptive CAM. Note that monitoring for the presence of a flame is not required under MACT HH but is an additional measure proposed by the source to prevent flame outages.

2. Emission Factors – Triethylene glycol is contacted with the natural gas stream to reduce the moisture in the natural gas to a desired level. This glycol-water mixture is heated in the still vent portion of the unit to remove the collected moisture from the glycol. Volatile organic compounds and hazardous air pollutants entrained in the water are also released. The emissions from this process may be estimated using the Gas Research Institute's GLYCalc Model. The Model algorithm estimates the volatile organic compound and hazardous air pollutant emissions based on inputs of the glycol recirculation rate, cubic feet of gas processed, inlet temperature and pressure of the processed wet gas, and percentage breakdown by volume of constituents in the natural gas. The “worst-case” emissions were estimated using GRI GLYCalc 3.0 and submitted to the Division on February 14, 2001 during the construction permitting process.

3. Monitoring Plan – The source will be required to record the quantity of natural gas processed and calculate emissions monthly.

The Gas Research Institute’s manual for the GLYCalc Model defines the wet gas (inlet) temperature, glycol recirculation rate, and gas BTEX content as the three critical inputs to the Model for triethylene glycol units. The Division is requiring daily monitoring of the following parameters, which are used in GLYCalc: glycol circulation rate and inlet gas temperature. Samples of the inlet gas shall be collected and analyzed quarterly. Frequency of analysis will be changed if the BTEX content is shown to be consistent. The hours/days of operation of the TEG shall also be monitored.

Emissions are calculated using the worst case emissions estimate. If the monitored parameters don’t pass the stipulated passing criteria, a GRI GLYCalc run must be conducted for that month and used to estimate emissions.

The temperature of the thermal oxidizer shall be monitored on a continuous basis and the condenser temperature must be monitored on a daily basis to ensure that they are working properly.

The renewal permit contains a requirement to conduct another stack test on the emissions from the TEG. The previous test conducted on May 25, 2004 did show compliance with the 99% control requirement. However, the test was conducted at only 69% of the permitted throughput limit. The Division reviewed the test and required that the source retest at greater than or equal to 80% of the throughput limit, or reduce the throughput limit. The source did not want to limit the capacity of this facility, so the retest will be required. The APCD Compliance Test Manual actually requires tests to be conducted at 90% of permit throughput limits, but the Division will be satisfied if they retest at 80% of the limit. The stack testing language has been written so that Kerr-McGee must test within 180 days after the first month in which the throughput represents 80% of their permit limit. Thus, after a month where they exceed 1947 million scf, a stack test is required.

Construction permit 03WE1153

Section II.5 - Unit EU-43 Caterpillar Model G3608LE with oxidizing catalyst. The source submitted a construction permit application for this unit on December 18, 2003. The Initial Approval construction permit was issued on December 26, 2003. Initial Approval Modification No. 1 was issued April 28, 2004. The requirements of this construction permit were added to the Title V Operating Permit as requested.

1. Applicable Requirements –
CAM does not apply to this engine since uncontrolled emissions do not exceed Title V major source levels. The engine is allowed to operate under the temporary and permanent Alternative Operating Scenarios (AOS). The renewal permit has updated the AOS to the current version (8/1/05).

The appropriate applicable requirements are as follows:

- Gas use shall not exceed 133 million scf per year.

- NO_x emissions shall not exceed 14.3 tons/yr, CO emissions shall not exceed 10.2 tons/yr, VOC emissions shall not exceed 15.5 tons/yr, Formaldehyde emissions shall not exceed 1.6 tons/yr. The emission factors are from the engine manufacturer.

- Reg. 1 opacity requirement (Reg. 1, Section II.A.1). Some of the engine opacity language has been changed to make it clear that natural gas is the only fuel allowed to be used

- The engine shall be equipped with an oxidizing catalyst capable of reducing CO by 80%, VOC by 50% and formaldehyde by 80%. The source must operate and maintain the catalyst and engine according to the O&M plan and Miratech oxidation catalyst maintenance procedures.

- This engine is subject to the RICE MACT (40 CFR Part 63, subpart ZZZZ). The Caterpillar engine (EU-43) is considered a new 4-stroke lean burn engine subject to the RICE MACT. This renewal permit includes the applicable requirements from Subpart ZZZZ. The draft permit will assume that Kerr McGee will comply with the option to reduce carbon monoxide by 93 percent or more (instead of the formaldehyde concentration limit). An initial performance test to measure O_2 and CO was required by February 10, 2005. Subsequent performance tests will be conducted semi-annually. The various limits, testing, monitoring, recordkeeping and reporting requirements are outlined in Condition 5.9 and 5.10.

- Reg. 7 – Control of Emissions from stationary and portable engines (Reg. 7, Section XVI.A.2).

2. Emission Factors – The emission factors were submitted during the construction permit process. These emission factors have been converted from gram/hp-hr to lb/MMBtu and are listed in the renewal permit.

3. Monitoring Plan – The source will be required to record the quantity of natural gas combusted and calculate emissions monthly.

The source is required to conduct portable monitoring of NOx and CO on a quarterly basis (Section II, Condition 5.4).

The BTU content of the natural gas shall be determined semi-annually (twice per year) and used in the emission calculations.

The catalyst inlet temperature shall be monitored monthly to determine if it has remained within the manufacturers recommended operating range.

<u>Construction permit 03WE0064</u>

It should be noted that revisions were made to Colorado Regulation No. 3, regarding condensate storage tanks and condensate truck loading equipment and those revisions took effect on December 30, 2002. Previously, under Regulation No. 3, certain size condensate storage tanks and condensate truck loading equipment meeting a specified throughput limit were exempt from APEN reporting and permitting requirements and were considered insignificant activities for Title V operating permit purposes. With the revisions to Colorado Regulation

No. 3, only condensate storage tanks and condensate loading equipment at exploration and production (E & P) sites meeting specified throughput limits are APEN exempt and insignificant activities. Kerr-McGee has submitted an APEN for the condensate storage tanks at the Frederick facility. Therefore, since these tanks are subject to APEN reporting requirements, the Division will include the condensate storage tanks in Section II of the renewal operating permit.

Section II.4 - Unit T001 Condensate storage tank battery with flare. The source submitted a construction permit application for this unit on January 27, 2003. The Initial Approval construction permit was issued on July 24, 2003. Initial Approval Modification No. 1 was issued September 17, 2004. The requirements of this construction permit were added to the Title V Operating Permit as requested. A revised APEN was submitted on April 20, 2006 to increase the throughput for these tanks from 27,000 bbl/yr to 35,000 bbl.yr. This modification was included in the renewal permit.

1. Applicable Requirements –

The appropriate applicable requirements are as follows:

- Condensate production shall not exceed 35,000 bbl per year.
- VOC emissions shall not exceed 38.7.0 tons/yr. Calculated using API's E&P Tanks.
- NO_x emissions shall not exceed 2.82 tons/yr and CO emissions shall not exceed 5.63 tons/yr. The emission factors are from Texas Natural Resource Conservation Commission (TNRCC) Flare and Vapor Oxidizers.
- The permit holder shall follow the most current Division-approved O&M plan.
- The control system shall be capable of reducing VOC emissions by at least 95.0%. Compliance with the CAM plan shall ensure 95% control.
- Reg. 7 – VOC Emissions from Oil & Gas Operations (Reg. 7, Section XII.A).

<u>CAM Plan Review</u>

The flare is provided with burner control panels that provide constant assurance of a lit flame and re-occurring spark. The burner control panel provides a spark for two seconds every twenty seconds. The spark is audible and the absence of the audible spark can be detected when operators are on-site. The flare is also equipped with a thermal device to

ensure that a flame is present. If the thermal device indicates there is no flame detected, the pilot flame may be re-lit by the spark.

The CAM rule specifies that presumptively acceptable monitoring includes monitoring required for any standards that are exempt from CAM (i.e. MACT standards), provided the monitoring is applicable to the control device (40 CFR Part 64 § 64.4(b)(4), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV). The specific monitoring requirements for a storage tank equipped with an open flare in the NGTS MACT are found at § 63.1283(d)(3)(i)(C) and state that "For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame". Therefore, the Division considers that specifying a heat sensing monitoring device to detect the presence of a flame is an appropriate indicator, since the NGTS MACT requires monitoring for the presence of a flame. CAM specifies that for small pollutant specific emission units (i.e. emission units with controlled emissions less than the major source level) that the minimum monitoring frequency for at least some parameters is every 24 hours (40 CFR Part 64 § 64.3(b)(4)(iii) as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV). Therefore, although the heat sensing device continuously monitors the presence of a flame, since the storage tank battery is a small pollutant specific emission unit, the Division considers that a continuous recorder is not necessary to meet the CAM requirements and therefore, daily checks on the presence of a flame are sufficient to meet CAM. Although the monitoring cannot be considered presumptive CAM, the indicator (presence of a flame) and the monitoring method (heat sensing device) are consistent with the parameters and monitoring method specified in the NGTS MACT and the frequency of monitoring the indicator meets the requirements in 40 CFR Part 64 § 64.3(b)(4)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV; therefore the Division considers that the monitoring in the CAM plan meets the CAM requirements. Note that monitoring the pilot light spark is not required under the NGTS MACT but is an additional measure that has been proposed by other sources to prevent flame outages and has been included in the CAM plan for this unit.

2. Emission Factors – The emissions are estimated using API's E&P Tanks. Emissions are calculated on a monthly basis. Combustion emissions are estimated using emission factors from TNRCC and listed in the renewal permit.

3. Monitoring Plan – The source will be required to record the quantity of condensate processed and calculate emissions monthly.

Some E&P Tanks input parameters must be monitored. The separator temperature and pressure will be monitored monthly. Liquids shall be analyzed annually. Sales condensate shall be analyzed annually to determine the RVP, and API gravity will be determined from sales receipts on an annual basis.

Insignificant Activities

A July 11, 2003 letter requests the addition of an Volvo Penta, 464 hp engine for emergency generation to the insignificant activity list. The list has been updated.

Cooper Bessemer Engines – Changes in HP and BTU content of fuel

The Frederick Compressor Station's Title V permit contains two Cooper Bessemer engines that are covered by construction permits 13WE199 & 12WE804. Kerr McGee informed the Division in a May 6, 2004 letter that these two engines should actually be rated at 4800 HP, not 4000 HP. Kerr McGee later modified this request to 4670 HP, which represents maximum horsepower at 40 °F ambient temperature and 70 °F air manifold temperature. Kerr McGee stated that this change was not due to a modification, but that the HP had been incorrectly reported in the past. The Division has updated the renewal permit to reflect the newly reported horsepower.

An April 6, 2004 letter requests an increase in the BTU content (to 1060 BTU/scf) of the gas used to fuel the Cooper Bessemer engines. A letter dated August 9, 2005 changes the request to 990 BTU/scf, which represents the average BTU content over the last three years. A submittal dated November 4, 2005 includes APENs identifying engine emissions while fueled with 990 BTU/scf gas.

Emissions from the engines have increased due to the change in HP and BTU content of the fuel. The Division sent a letter to Kerr McGee on April 12, 2005 stating that the changes were considered an operational change to an existing source which will result in an emissions increase. The Division requested submittal of a PSD analysis consisting of an Actual to Potential analysis to determine if the modification qualifies as a major modification under the PSD rules. Kerr McGee submitted the Actual to Potential analysis to the Division on August 15, 2005. None of the pollutants exceeded the PSD significance levels. However, NO_x emissions increased 38.77 TPY.

The Division does not consider this a major modification for PSD since the significance levels were not exceeded. This issue may be reviewed again if Kerr McGee requests an emissions increase due to an another increase in BTU content of the fuel, or any other reason. NO_x emissions were very close to exceeding the significance level of 40 TPY and the Division will need to review any future request for emissions increase very carefully to make sure the modifications were not circumventing PSD.

Component count & equipment leaks

The permittee requested to conduct a component hard count on an annual basis instead of the previous method, which required a hard count every five years along with a running total of additions/subtractions. The Division will allow this annual hard count approach.

An April 16, 2004 letter contained a request to remove the requirement to monitor, repair and log all potential equipment leaks. The Division will remove this requirement. This requirement is not typically expected of sources unless they are subject to NSPS Subpart KKK.

The Division has also modified the permit language to make it clear that Kerr McGee is allowed to use the most appropriate emission factors from the cited EPA document. Previously it implied that only the gas factors could be used.

The Division has included language throughout the permit that allows Kerr McGee to keep records on-site, or at a local field office. Kerr McGee is still required to produce documents in a timely manner when requested by the Division.

Other Modifications

In addition to the modifications requested by the source, the Division has included changes to make the permit more consistent with recently issued permits, include comments made by EPA on other Operating Permits, as well as correct errors or omissions identified during inspections and/or discrepancies identified during review of this renewal. These changes are as follows:

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It should be noted that the monitoring and compliance periods and report and certification due dates are shown as examples. The appropriate monitoring and compliance periods and report and certification due dates will be filled in after permit issuance and will be based on permit issuance date. Note that the source may request to keep the same monitoring and compliance periods and report and certification due dates as were provided in the original permit. However, it should be noted that with this option, depending on the permit issuance date, the first monitoring period and compliance period may be short (i.e. less than 6 months and less than 1 year).

- Added language specifying that the semi-annual reports and compliance certifications are due in the Division's office and that postmarks cannot be

used for purposes of determining the timely receipt of such reports/certifications.

Section I – General Activities and Summary

- The permitted activities description and attainment status of Weld County was updated.

- Construction permits 01WE0349, 03WE0064 & 03WE1153 were added to Condition 1.3 and 95WE781 was removed.

- Conditions 13 and 17 in Condition 1.4 were renumbered to 14 and 18 and Condition 21 in Condition 1.5 was renumbered to 22. The renumbering changes were necessary due to the addition of the Common Provisions requirements in the General Conditions of the permit.

- In Condition 1.4, General Condition 3.g (new general condition for general provisions) was added as State-only requirements.

- The language for the alternative operating scenario for temporary engine replacement was updated to reflect current language (06/01/2006 version). The language for the permanent engine replacement was added to the permit since it appeared in construction permit 03WE1153.

- Minor language changes were made to Condition 3 to more appropriately reflect the status of the source with respect to PSD.

- Based on comments made by EPA on another operating permit, the phrase "Based on the information provided by the applicant" was added to the beginning of Condition 4.1 (112(r)).

- Added a "new" Section 5 for compliance assurance monitoring (CAM).

- The table in Section 6 has been updated to reflect current equipment and control devices.

Section II – Specific Permit Terms

Section II.1 - Unit EU-41 & EU-42: Cooper Bessemer Engines

- The Division discovered a PSD permit issued for this facility by EPA in November 1981. The permit limited a Cooper engine to 450 ppm NO_x. The Division initially assumed this limit was for EU-42. However, the Division now believes this permit was issued for a third Cooper engine that was never installed. This is based on the fact that EPA correspondence associated with the PSD permit identifies the Frederick facility as a major source of NO_x and installation of the Cooper engine as a major modification. The two existing Cooper

engines received construction permits from the Division on March 20, 1980 and July 2, 1981. The engines were permitted at 230.6 TPY NO_x each. Thus, the facility would not have been considered a major source (>250 TPY) until after the 2nd engine was permitted. The Division will not include the 450 ppm NO_x limit in the Title V permit and considers EPA's PSD permit to be canceled since the third engine was never installed.

- The portable monitoring language was updated to the current version (06/01/2006) and moved to Condition 1.4.

- Modified the language in Condition 1.5 to require BTU content to be determined on a semi-annual basis.

- Added Condition 1.7 for the requirement to control emissions from stationary and portable engines in the 8-hour ozone control area. Kerr McGee submitted a request on 8/9/2005 for exemption from this requirement. The Division responded with an 8/29/2005 letter denying the request for exemption since it was submitted after the 5/1/2005 deadline.

- Some of the engine opacity language has been changed to make it clear that natural gas is the only fuel allowed to be used.

Section II.3 - Unit F001: Fugitive Emissions of VOC from Equipment Leaks

- The equation in Condition 3.1 to calculate VOC emissions was revised to indicate that the weight percent VOC shall be used to calculate emissions. Since the emission factors are in lb/hr, it is appropriate to use weight percent VOC.

<u>Section III – Permit Shield</u>

- The citation in the permit shield was corrected. The reference to Part A, Section I.B.43 was changed to Part A, Section I.B.44 and the reference to Part C, Section XIII was changed to Part C, Section XIII.B.

<u>Section IV – General Conditions</u>

- Added language from the Common Provisions (new condition 3). With this change the reference to "21.d" in Condition 21 (prompt deviation reporting) will be changed to "22.d", since the general conditions are renumbered with the addition of the Common Provisions.

- The citation in General Condition 17 (open burning) was revised. The open burning requirements are no longer in Reg 1 but are in new Reg 9. In addition, changed the reference in the text from "Reg 1" to "Reg 9".

- The definition of “prompt” has changed and Condition 21 has been updated with the new definition.

- Minor language changes to Condition 22.d have been incorporated.

Appendices

- Appendix B & C have been updated to the current version (06/01/2006). The requirement to determine if data was continuous has been removed from Appendix C.

- The table in Appendix F has been cleared of past modifications.

- Added the CAM Plans to Appendix H & I.

- The fuel design rate for engines has been corrected in Appendix G.